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Subject: A Swiss Army knife of modulation techniques.

Committee(s): C4 and C5.

The first small step from the understanding that SSB is no better than DSB in terms of effective use of power and spectrum turned into giant leap of the understanding that wideband signals, to the first order of approximation, can be as good users of power and spectrum as narrow band ones.

What nonsense...

Isn't it obvious that SSB uses only half of the spectrum of DSB, thus doubling the available spectrum. Well, the first refutation is that two orthogonal DSB signals on the same suppressed carrier frequency can carry two independent audio signals, just the same as two SSB signals do in the same bandwidth. Further refutations are carried in Costas' papers of 1956, "Synchronous Communications" and 1959 "Poisson, Shannon and the Radio Amateur," and many others later.

Since then this field and line of thinking has proliferated in a number of varied ways. For instance Henning F. Harmuth's in 1977 in the "The Dogma of the Circle," points out that sinusoidal signals, based on circular motion are far from the only signals having analogous properties of being able to be used as building blocks for any other type of signals. The key being the orthogonality, not whether the basic signals may be derived from the circle or not.

To open up to possible interesting prospects for the future of amateur radio experimentation, spectrum efficiency and utilization:

We propose:

to continue and develop the framework for wideband experimentation on the amateur bands by opening up new designated segments of existing and new bands for free experimentation with unheard of modulation modes and techniques.

Financial Implications:

Not any known at this time.